

What is claimed is:

1. A data writing apparatus for writing data into storage means, comprising:

an processor;

first storage means where data to be written has a redundancy structure; and

a control unit which writes data in said first storage means in response to a command from said processor and includes

second storage means, and

logical disk writing/reading means for writing in said second storage means data writing of which at an address in said first storage means is instructed by said processor and reporting completion of writing to said processor, when a redundancy destruction occurs at said address.

2. The data writing apparatus according to claim 1, wherein said control unit further comprises logical disk monitoring means which verifies if said redundancy destruction at said address has been recovered, and

when said logical disk monitoring means verifies that said redundancy destruction at said address has been recovered, said logical disk writing/reading means reads data written in said second storage means and writes said data at said address in said first storage means.

3. The data writing apparatus according to claim 2, wherein said logical disk monitoring means comprises:

management table updating means which checks a status of said first storage means and updates a management table;

a timer which informs said management table updating means

of passage of a given time when elapsed; and

write-enableness reporting means which reports recovery of said redundancy destruction at said address to said logical disk writing/reading means when said management table indicates said recovery of said redundancy destruction.

4. The data writing apparatus according to claim 1, wherein said second storage means is non-volatile storage means or volatile storage means having an independent power supply.

5. The data writing apparatus according to claim 1, wherein said second storage means retains data written by said control unit until said data is written in said first storage means.

6. A data writing/reading apparatus for writing data into storage means, comprising:

an processor;

first storage means where data to be written has a redundancy structure; and

a control unit which writes data in said first storage means in response to a command from said processor and includes

second storage means, and

logical disk writing/reading means for writing in said second storage means data writing of which at an address in said first storage means is instructed by said processor and reporting completion of writing to said processor, when a redundancy destruction occurs at said address, and reading from said second storage means data for which a command to read from said address is given from said processor when that data exists.

7. The data writing/reading apparatus according to claim 6, wherein said control unit further comprises logical disk monitoring

means which verifies if said redundancy destruction at said address has been recovered, and

when said logical disk monitoring means verifies that said redundancy destruction at said address has been recovered, said logical disk writing/reading means reads data written in said second storage means and writes said data at said address in said first storage means.

8. The data writing/reading apparatus according to claim 7, wherein said logical disk monitoring means comprises:

management table updating means which checks a status of said first storage means and updates a management table;

a timer which informs said management table updating means of passage of a given time when elapsed; and

write-enableness reporting means which reports recovery of said redundancy destruction at said address to said logical disk writing/reading means when said management table indicates said recovery of said redundancy destruction.

9. The data writing/reading apparatus according to claim 6, wherein said second storage means is non-volatile storage means or volatile storage means having an independent power supply.

10. The data writing/reading apparatus according to claim 6, wherein said second storage means retains data written by said control unit until said data is read by said control unit.

11. A data writing apparatus for writing data into storage means, comprising:

an processor;

first storage means including data writing of which is instructed by an processor and redundancy data and capable of, if

data of a size equal to or smaller than a size of said redundancy data is destroyed, ensuring data writing from remaining data while repairing said data writing of which is instructed, in response to a command from said processor;

a control unit which writes data in said first storage means in response to a command from said processor and includes

second storage means, and

logical disk writing/reading means for writing in said second storage means data for which a command to write at an address in said first storage means is given from said processor and reporting completion of writing to said processor, when writing is not possible due to an error during data correction in an area including said address.

12. A method for writing data into storage means where data to be written has a redundancy structure, comprising the steps of:

A) when a redundancy destruction occurs at an address in said first storage means where data to be written has a redundancy structure, writing in said second storage means data writing of which at said address is instructed by an processor; and

B) reporting completion of writing to said processor.

13. The method according to claim 12, further comprising the steps of:

C) verifying if said redundancy destruction at said address has been recovered;

D) when recovery of said redundancy destruction is verified, reading data written in said second storage means; and

E) writing said data at said address in said first storage means.

14. The method according to claim 12, further comprising the steps of:

F) checking a status of said first storage means when a given time elapses;

G) updating a management table;

H) reading data written in said second storage means when said management table indicates recovery of said redundancy destruction; and

I) writing said data at said address in said first storage means.

15. A method for writing and reading data into and from storage means where data to be written has a redundancy structure, comprising the steps of:

J) when a redundancy destruction occurs at an address in said first storage means, writing in said second storage means data writing of which at said address is instructed by an processor;

K) reporting completion of writing to said processor; and

L) when there is data reading of which from said address is instructed by said processor, reading said data from said second storage means.

16. The method according to claim 15, further comprising the steps of:

M) when recovery of said redundancy destruction is verified, reading data written in said second storage means and writing said data at said address in said first storage means.

17. The method according to claim 15, further comprising the steps of:

N) checking a status of said first storage means when a given

time elapses;

O) updating a management table;

P) reading data written in said second storage means when said management table indicates recovery of said redundancy destruction; and

Q) writing said data at said address in said first storage means.

18. A computer program capable of running on a computer so that the computer performs said steps of claim 12.